CERTIFICATE OF EXPRESS MAIL

NUMBER EL 831787638 US

DATE OF DEPOSIT : December 19, 2001

I hereby certify that this paper or fee is being deposited with the United States Postal Service "EXPRESS MAIL POST OFFICE TO ADDRESSEE" service under 37 C.F.R. 1.10 on the date indicated above and is addressed to: Commissioner for Patents, Washington, D.C. 20231.

Paula S. Linkhart

Paula S. Linkhart

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	§	
	§	Group Art Unit:
Rudi Pauwels	§	
Christiaan Roelant	§	
Koenraad Van Ackler	§	Examiner:
	§	
Serial No.:	§	
	§	Atty. Dkt. No.: **TIBO:002--1**
Filed: **December 19, 2001**	§	**13468.0002.DVUS01**
	§	
For: **APPARATUS FOR THE SIMULTANEOUS TRANSFER OF LIQUID ANALYTES (AMENDED)**	§	

PRELIMINARY AMENDMENT

BOX PATENT APPLICATION
Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination, please amend this application as follows:

IN THE SPECIFICATION:

At page 1, line 2 please delete the original title and insert a new Title:

--APPARATUS FOR THE SIMULTANEOUS TRANSFER OF LIQUID ANALYTES--

At page 1, line 4 after the title, please insert the following new paragraph:

--This is a divisional of co-pending application Serial No. 09/530,907 filed June 30, 2000, which is a §371 national application of PCT/IB98/01399 filed September 8, 1998 and published in English on March 16, 2000 as WO 00/14540.- -

IN THE CLAIMS:

Please cancel claims 1-38 and 41-44.

Please add new claims 45-68:

45. An apparatus for the simultaneous transfer of liquid analytes, comprising:

a plurality of capillary tubes arranged in a holder device, wherein the liquid analytes are taken up by the plurality of capillary tubes by capillary action;

a housing adapted to receive said plurality of capillary tubes; and

means to apply a stimulus to effect transfer of liquid analytes from the capillary tubes to at least one solid support.

46. The apparatus according to claim 45, wherein the capillary tubes are arranged in the holder device in an array.

47. The apparatus according to claim 46, wherein said array is a rectangular array.

48. The apparatus according to claim 46, wherein said array is a concentric array.

49. The apparatus according to claim 46, wherein said array is a spiral array.

50. The apparatus according to claim 46, whereby the capillary tubes are parallel aligned with respect to each other.

51. The apparatus according to claim 45, whereby the ends of the capillary tubes define a flat surface.

52. The apparatus according to claim 45, wherein the number of the capillary tubes is 96.

53. The apparatus according to claim 45, wherein the means to apply a stimulus comprises a pressure change using a piezo-electric element.

54. The apparatus according to claim 45, wherein the housing is connected to an air pump, which is adapted to create a pressure difference relative to the exterior of the housing to force the liquid analytes out of the capillary tubes.

55. The apparatus according to claim 45, wherein the means to apply a stimulus provokes high frequency conditions to break a liquid column into droplets.

56. The apparatus according to claim 55, wherein the droplets of each transferred liquid analyte onto the support have a size of nanolitre or picolitre.

57. The apparatus according to claim 45, wherein the open ends of the capillary tubes are able to dispense the liquid analytes to the solid support with or without direct contact between the capillary tube and the solid support.

58. The apparatus according to claim 45, further comprising at least one solid support for the acceptance of liquid analytes.

59. A holder device suitable for use in the apparatus according to claim 45, comprising a plurality of capillary tubes mounted in a mounting element, said mounting element maintaining the capillary tubes in a desired relationship relative to each other.

60. The holder device according to claim 59, wherein the capillary tubes are arranged in an array.

61. The holder device according to claim 59, whereby the capillary tubes are parallel aligned with respect to each other.

62. The holder device according to claim 59, whereby the ends of the capillary tubes define a flat surface.

63. The holder device according to claim 59, wherein the number of the capillary tubes is 96.

64. The holder device according to claim 59, wherein the mounting element comprises one or two plates.

65. The holder device according to claim 59, whereby the distance of the capillary tubes in an array is variable.

66. A process for adapting the distance between the capillary tubes in an array from which liquid analytes are able to be simultaneously transferred to a solid support such that the transferred liquid analytes remain isolated from one another, comprising:

i) filling the capillary tubes,

ii) transferring the filled capillary tubes to a screw or worm device having a thread with a varying pitch, and

iii) turning said device thereby varying the spacing between the capillary tubes.

67. The process according to claim 66, wherein the distance between the capillary tubes is varied to meet a specific requirement such as a distance of 1 mm, 1.414 mm, 2 mm, 2.236 mm, 3 mm, or 3.623 mm.

68. The process according to claim 66 further comprising discharging the capillary tubes from the device onto a tape having an adhesive layer.

REMARKS

The specification has been amended to recite the relationship with the parent case and to provide a new title that better corresponds to the instant claims.

The active claims in this case are claims 39, 40 and 45-68. The new claims 45-65 are directed to an apparatus for the simultaneous transfer of liquid analytes. Claims 66-68 are directed to a process for adapting the distance between capillary tubes. Support for the new claims is found at pages 4-6 and 21-24; Figures 12 and 18 – 22; and annexed claims 39 and 40.

It is believed that no fee is due; however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be required for any reason, the Commissioner is authorized to deduct said fees from **Deposit Account No. 01-2508/13468.0002.DVUS01**.

Respectfully submitted,

Pal Kammerer

Patricia A. Kammerer
Reg. No. 29,775

Attorney for Assignee
TIBOTEC N.V.

Date: December 19, 2001

H: 464304(9Y9C01! DOC)